

## **CLAIM AMENDMENTS:**

1. (currently amended) An apparatus for use in conducting chemical or biological reactions requiring the input of at least one fluid reagent and/or the output of at least one fluid product, the apparatus comprising a reaction chamber having an inlet for the supply of at least one reactant and an outlet for the recovery of at least one product, the reaction chamber being provided with a regulator comprising a propeller mounted in the reaction chamber in the region of the inlet for dispersing the at least one reactant in the reaction chamber, wherein the propeller has a longitudinal shaft defining a rotation axis and at least one blade attached to the shaft by means of an elongated blade root, the propeller being tilted at an angle of from between  $0.5^{\circ}$  to  $60^{\circ}$  with respect to the longitudinal axis of the reactor inlet.

2. (previously presented) An apparatus as claimed in claim 1, provided with at least one perforated element capable of allowing the passage of fluid material therethrough.

Claims 3-8 (canceled).

9. (previously presented) An apparatus according to claim 2, wherein the perforated element and/or the propeller is heated by a heating means.

Claims 10-12 (canceled).

13. (previously presented) An apparatus according to claim 9, wherein the propeller is connected to a power supply for driving the propeller.

14. (previously presented) An apparatus according to claim 1, wherein the propeller comprises a plurality of vanes in the shape of a semi-circle, an ellipse, a

tear drop, a half tear drop, a bellcurve, a half bellcurve, a rectangle, a triangle and derivatives thereof.

Claims 15-31 (canceled).

32. (previously presented) An apparatus according to claim 2, wherein the propeller is mounted beneath the perforated element.

33. (previously presented) An apparatus according to claim 13, wherein the degree of heating and/or the speed is controllable by means of an electronic control unit associated with the apparatus.

34. (currently amended) An apparatus to regulate distribution of at least one fluid reagent and the output of at least one fluid product, the apparatus comprising a reaction chamber having an inlet for supply of the at least one fluid reagent and an outlet for recovery of the at least one fluid product, the reaction chamber being provided with a regulator comprising a propeller mounted in ~~the reaction chamber in a region of the inlet~~ for the distribution of the at least one fluid reagent in the reaction chamber, the propeller having a longitudinal shaft defining a rotation axis and at least one blade attached to the shaft by an elongated blade root, the propeller being tilted at an angle of between 0.5° to 60° with respect to the ~~rotation axis of the shaft~~ inlet.

35. (previously presented) A process for conducting a chemical or biological reaction comprising supplying at least one fluid reagent to a reaction chamber via a reactor inlet fitted with a regulator in accordance with claim 1.

36. (currently amended) An apparatus according to claim 1, wherein the rotation axis of the shaft extends substantially along the longitudinal axis of the ~~reactor~~ reaction chamber.

37. (previously presented) An apparatus according to claim 36, wherein the propeller is closer to the inlet than the outlet.

38. (new) An apparatus for use in conducting chemical or biological reactions requiring the input of at least one fluid reagent and/or the output of at least one fluid product, the apparatus comprising a reaction chamber having an inlet for the supply of at least one reactant and an outlet for the recovery of at least one product, the reaction chamber being provided with a regulator comprising a propeller mounted in the outlet for dispersing the at least one reactant in the reaction chamber, wherein the propeller has a longitudinal shaft defining a rotation axis and at least one blade attached to the shaft by means of an elongated blade root, the propeller being tilted at an angle of from between  $0.5^{\circ}$  and  $60^{\circ}$  with respect to the longitudinal axis of the outlet.

39. (new) An apparatus to regulate distribution of at least one fluid reagent and the output of at least one fluid product, the apparatus comprising a reaction chamber having an inlet for supply of the at least one fluid reagent and an outlet for recovery of the at least one fluid product, the reaction chamber being provided with a regulator comprising a propeller mounted in the outlet for the distribution of the at least one fluid reagent in the reaction chamber, the propeller having a longitudinal shaft defining a rotation axis and at least one blade attached to the shaft by an elongated blade root, the propeller being tilted at an angle of between  $0.5^{\circ}$  to  $60^{\circ}$  with respect to the axis of the outlet.